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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,918

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Hirosato Amano

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12/14/2010

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

MAUST, TIMOTHY LEWIS

ART UNIT

PAPER NUMBER

3751

NOTIFICATION DATE

DELIVERY MODE

12/14/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/549,918	Applicant(s) AMANO, HIROSATO	
	Examiner Timothy L. Maust	Art Unit 3751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) 24-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-23, 32-42 and 44-54 is/are rejected.
- 7) ☒ Claim(s) 10 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/5, 6/7, 7/7, 1/8, 4/8, 7/9, 10/9</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, claims 1-23 and 32-54 in the reply filed on 10/18/10 is acknowledged. Claims 24-31 have been withdrawn.

Claim Objections

Claim 54 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 54 defines a gas permutation unit that has already been defined in claim 32.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 and 11-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichikawa et al. (6854493)

The applied reference has a common Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1-3, the Ichikawa et al. reference discloses a powder filling device comprising (Refer to Figures 15 and 16): A measuring tank (30) having a powder discharge port (30a) and a filling amount control unit (32) disposed near the powder discharge port; and an auxiliary container (see funnel 2 in Figure 16) having an opening disposed on an underside of the powder discharge port of the measuring tank which faces downward, wherein a powder externally delivered into the measuring tank is discharged from the powder discharge port into a powder filling container (3) disposed on an underside of the auxiliary container while a filling amount of the powder is controlled by the filling amount control unit, and the powder is temporarily dropped to the auxiliary container, and further dropped to the powder filling container so that the powder filling container is filled up with the powder.

Regarding claim 4, wherein the powder filling device further comprises a rising/falling unit (23) provided for moving up and down the auxiliary container.

Regarding claim 5, wherein the filling amount control unit is provided with at least three filling amount control functions of free powder discharging, powder discharge stopping, and partial powder discharging (see col. 2, lines 45-48).

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Regarding claim 6, wherein the measuring tank is formed with a cylinder body (1) which extends from a position where the filling amount control unit is disposed to a position of the powder discharge port.

Regarding claim 7, wherein the filling amount control unit comprises an elastic body ring fixed (32a) to the powder discharge port of the measuring tank (1), and a discharge control unit (32) which controls discharging of the powder from the powder discharge port, wherein the discharge control unit comprises a discharge amount control member (32d) which is mounted on a discharge control lever (32c) which is moved up and down within the measuring tank (1), and wherein the discharge amount control member (32d) comprises a conical-shape member which opens and closes the powder discharge port by separation of the conical-shape member from the powder discharge port and insertion of the conical-shape member to the powder discharge port.

Regarding claim 8, wherein a degree of opening/closing of the powder discharge port is adjusted by a degree of insertion of the conical-shape member to an opening of the elastic body ring which depends on a degree of an up/down movement of the discharge control lever within the measuring tank (see col. 6, lines 32-36).

Regarding claims 9 and 11, wherein the filling amount control unit is made of a filter material (i.e. a mesh material) which passes a gas and does not pass the powder, and the powder is drawn to the filter material by using a gas suction unit communicating with the filling amount control unit, so that the filling amount of the powder is controlled according to a degree of suction of the powder by the gas suction unit (see col. 14, lines 52-54).

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Regarding claim 12, wherein a powder fluidization hopper (10) which is connected with the measuring tank is provided, and, after the powder in the powder fluidization hopper is delivered to the measuring tank temporarily, the powder in the measuring tank is delivered to the powder filling container.

Regarding claims 13 and 19, wherein a powder outlet of the powder fluidization hopper and a powder inlet of the measuring tank communicate with each other through a connecting tube (20).

Regarding claim 14, wherein the powder fluidization hopper comprises an inclined inside wall portion (14), and the powder inside the powder fluidization hopper is sent to the powder outlet by the inclined inside wall portion.

Regarding claim 15, wherein the powder fluidization hopper (10) comprises a powder fluidization unit (33), and the powder in the powder fluidization hopper is fluidized with a gas sent from the powder fluidization unit, and the fluidized powder is sent to the measuring tank.

Regarding claim 16, wherein the powder fluidization unit is provided with a gas introducing pipe attached thereto, and the gas introducing pipe introduces a pressurized gas to a porous body which has a number of fine holes for spouting a gas, and the fine holes communicate with each other inside the porous body (see col. 7, lines 13-17).

Regarding claim 17, wherein a plurality of powder fluidization units are provided (15, 21 and 33) and each powder fluidization unit is provided with a gas introducing pipe attached thereto.

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Regarding claim 18, wherein the powder fluidization unit is disposed at the inclined inside wall portion (see 14 in Figure 15).

Regarding claim 20, wherein at least one of the powder fluidization hopper and the measuring tank is provided with a pressure control unit which controls an internal pressure of the at least one of the powder fluidization hopper and the measuring tank (see col. 14, lines 35-43).

Regarding claim 21, wherein a filling powder weight managing unit (41) is provided for managing the filling amount of the powder to the powder filling container.

Regarding claim 22, wherein the filling powder weight managing unit comprises a computation processing unit (62) which computes a filled-up powder weight based on an empty weight of the powder filling container on a load cell (61) and a gross weight of the powder filling container which is filled up with the powder.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. in view of Ichikawa et al.(5727607)

Regarding claim 23, the Ichikawa et al ('493) reference discloses the invention substantially as claimed (discussed supra), but doesn't disclose a powder feed hopper

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which supplies the powder to the powder fluidization hopper and a leading edge of a cylindrical part of the powder feed hopper where the powder is supplied is arranged so that the leading edge is buried in a surface portion of a powder layer of the powder fluidization hopper. However, the Ichikawa et al. ('607) reference discloses another powder feeder having a main hopper (2) with cylindrical part (14) having an edge buried in the powder. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Ichikawa et al. ('493) device to have a main feed hopper as, for example, taught by the Ichikawa et al. ('607) reference in order to further supply the powder fluidization hopper.

Claim 32-42, 44-52 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. in view of Wegman (6021821).

Regarding claims 32 and 54, the Ichikawa et al ('493) reference discloses the invention substantially as claimed (discussed supra), but doesn't disclose a gas permutation unit (see Figure 1) disposed on an underside of the powder discharge port of the measuring tank. However, the Wegman reference discloses another powder dispenser having a gas permutation unit (24, 32 and 34) for fluidizing and recycling. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Ichikawa et al. device to have a gas permutation unit as, for example, taught by Wegman in order to further fluidize and recycle the material.

Regarding claims 34 and 35, wherein the gas permutation unit is provided in the conical funnel-like auxiliary container, and the gas permutation unit comprises a gas

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ventilating pipe which is disposed and fixed to extend from a position near the powder outlet of the auxiliary container to an upper part of the auxiliary container (see Figure 1).

Regarding claims 33, 36-42 and 44-52, see 102(b) rejection above.

Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. in view of Wegman and further in view of Ichikawa et al.(5727607)

The Ichikawa et al ('493) reference as modified by Wegman discloses the invention substantially as claimed (discussed supra), but doesn't disclose a powder feed hopper which supplies the powder to the powder fluidization hopper and a leading edge of a cylindrical part of the powder feed hopper where the powder is supplied is arranged so that the leading edge is buried in a surface portion of a powder layer of the powder fluidization hopper. However, the Ichikawa et al. ('607) reference discloses another powder feeder having a main hopper (2) with cylindrical part (14) having an edge buried in the powder. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Ichikawa et al. ('493) device to have a main feed hopper as, for example, taught by the Ichikawa et al. ('607) reference in order to further supply the powder fluidization hopper.

Allowable Subject Matter

Claim 10 and 43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art of record pertains to various powder dispensers, similar to Applicant's device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Maust whose telephone number is (571) 272-4891. The examiner can normally be reached on Mon. - Thur. 7:00-5:30pm.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy L Maust/
Primary Examiner
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12/8/10

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